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EXAMINER	
MCKENZIE, THOMAS C	

ART UNIT	PAPER NUMBER
1624	

DATE MAILED: 04/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/518,501	ERION ET AL.	
	Examiner	Art Unit	
	Thomas McKenzie, Ph.D.	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,20-46,48-57,150-153,155-157,165,166 and 171-173* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20-46,48-57,150-153,155-157,165,166 and 171-173* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/8&12/24&2/27*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to arguments filed on 2/13/04. Applicant has not made any changes to the claims. There are sixty-seven claims pending and sixty-seven are under consideration. Claims 1-16, 17-46, 48-57, 165, and 171-173 are compound claims. Claims 150-153, 155-157 are method of preparation claims. The application concerns some cyclic phosphate amides and preparations thereof. This is the fourth action on the merits.

Response to Amendment

2. As discussed in the Interview of 9/10/03, a synthetic chemist would understand the nature of the reaction being claimed in claims 155-157 and 166. From that understanding, she would know what strength of oxidizing agent was required and which were typically used in phosphorus oxidation reactions. Thus, the indefiniteness rejection made in point #14 of the previous office action is withdrawn.

3. The declaration by Dr. Chabala under 37 CFR 1.132 filed 1/25/04 is insufficient to overcome the rejection of claims 1-3, 7, 9, 11-18, 20-46, 48-53, 56, 150-153, 155-157, 165, 166, and 171-173 based upon indefiniteness as set forth in the last Office action because: This concerns his points #5-#8. The only evidence supplied is the occurrence of the term "biologically active agent" in other US Patents. Firstly, Rule 132 declarations are a mechanism to introduce evidence and

must set forth facts, not merely conclusions, *In re Pike* 84 USPQ 235. Allegations are not probative, *In re Brandstadter* 179 USPQ 286, *In re Knowlton* 183 USPQ 33. Secondly, the indefiniteness remains despite what was allowed in another case. The U.S. Court of Customs and Patent Appeals wrote *In re Giolito* 188 USPQ 645: "We reject appellants' argument that the instant claims are allowable because similar claims have been allowed in a patent. It is immaterial whether similar claims have been allowed to others. See *In re Margaroli,* 50 CCPA 1400, 318 F.2d 348, 138 USPQ 158 (1963); *In re Wright*, 45 CCPA 1005, 256 F.2d 583, 118 USPQ 287 (1958); *In re Launder*, 41 CCPA 887, 212 F.2d 603, 101 USPQ 391 (1954)".

4. The declaration by Dr. Chabala under 37 CFR 1.132 filed 1/25/04 is insufficient to overcome the rejection of claims 1-3, 7, 9, 11-18, 20-46, 48-53, 56, 150-153, 155-157, 165, 166, and 171-173 based upon indefiniteness as set forth in the last Office action because: This concerns his points #9-#11. "whether a compound is or is not an FNBase inhibitor *** [does] not require undue experimentation". Undue experimentation is not a test for indefiniteness and in any case no weight is given to an opinion affidavit on the issue of ultimate legal conclusion, *In re Lindall*, 155 USPQ 521 and *In re Chilowsky* 134 USPQ 515. While testing for FBPase activity may or may not be routine, defining something

by what is not, does not address that vast array of molecules that are neither biologically active nor FBPase inhibitors. This definition does not distinguish the array of molecules that are biologically active but not FBPase inhibitors. This also avoids the essential point of the rejection that the structures of these functionally defined compounds are simply unknown.

5. The declaration by Dr. Chabala under 37 CFR 1.132 filed 1/25/04 is insufficient to overcome the rejection of claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 based upon lack of enablement for making as set forth in the last Office action because: this concerns his point #12. Dr. Chabala points to parts of the specification teaching how to make the compounds, which are within the scope of enablement material. Enablement is a legal issue and no weight is afforded his opinion that the remaining scope of compounds are enabled, *In re Lindall*, 155 USPQ 521 and *In re Chilowsky* 134 USPQ 515.

6. The declaration by Dr. Chabala under 37 CFR 1.132 filed 1/25/04 is insufficient to overcome the rejection of claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 based upon lack of written description as set forth in the last Office action because: this concerns his points #13. Written description is a legal issue and no weight is afforded his opinion that the claims are fully described, *In re Lindall*, 155 USPQ 521 and *In re Chilowsky* 134 USPQ 515.

7. The declaration by Dr. Chabala under 37 CFR 1.132 filed 1/25/04 is insufficient to overcome the rejection of claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 based upon lack of enablement for making prodrugs as set forth in the last Office action because: this concerns his points #14 and #15. Dr. Chabala points page 103 of the specification, which teaches synthesis of a number of compounds of formula I. There is no new evidence presented. However, that passage in question is silent as to the essential question of whether such compounds are, in fact, prodrugs or of making any prodrug of a molecule of formula (I). The passage provides no experimental method of determining if they are prodrugs. The scope of possible prodrugs is large and the declaration must present a showing which is commensurate in scope to the claimed subject matter, *In re Armbruster* 158 USPQ 152.

8. The declaration by Dr. Chabala under 37 CFR 1.132 filed 1/25/04 is insufficient to overcome the rejection of claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 based upon lack of enablement, being indefinite, and lacking written description as set forth in the last Office action because: this concerns his point #15 and #16. Again there is no evidence presented, only the assertion that search for prodrugs is routine in pharmaceutical companies. Rule 132 declarations are a mechanism to introduce evidence and

must set forth facts, not merely conclusions, *In re Pike* 84 USPQ 235. Mere allegations are not probative, *In re Brandstadter* 179 USPQ 286, *In re Knowlton* 183 USPQ 33.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 7, 9, 11-18, 20-46, 48-53, 56, 150-153, 155-157, 165, 166, and 171-173 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase in lines 20-21, page 2, claim 1, "M is selected from ... is a biologically active agents but is not an FBPase inhibitor" is indefinite. What is the structure of radical M? What do Applicants intend by "biologically active agent? How active and active as what? The phrase also occurs in claims 150, 166, `171, 172, and 173.

The Examiner suggests using chemical formulas to define the structure of the claimed "M" radical.

10. Claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way to convey reasonably to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The issue concerning the meaning of phrase "M is selected from ... is a biologically active agents but is not an FBPase inhibitor" is discussed above. Claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 do not contain a complete generic formula.

According to the MPEP §2163 I. A. "the issue of a lack of adequate written description may arise even for an original claim when an aspect of the claimed invention has not been described with sufficient particularity such that one skilled in the art would recognize that the applicant had possession of the claimed invention. The claimed invention as a whole may not be adequately described if the claims require an essential or critical feature which is not adequately described in the specification and which is not conventional in the art or known to one of ordinary skill in the art." The MPEP states in §2163 II 3 ii) "The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice

(see i)(A), above), reduction to drawings (see i)(B), above), or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus (see i)(C), above). See *Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d at 1406." Applicants have made no assertion that there is any correlation between the biological function of radical "M" and its structure.

As discussed above the phrase ""M is selected from ... is a biologically active agents but is not an FBPase inhibitor" is not art recognized in synthetic organic chemistry. According to the MPEP §2163.02 Standard for Determining Compliance With the Written Description Requirement,

> "The courts have described the essential question to be addressed in a description requirement issue in a variety of ways. An objective standard for determining compliance with the written description requirement is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed". *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the

> inventor had possession at that time of the later claimed subject matter". *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting In *re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983))."

Thus, the chemist of ordinary skill in the art, who would make Applicants' compounds, would not know what "M is selected from ... is a biologically active agents but is not an FBPase inhibitor". That chemist would not have understood the inventor to be in possession of the claimed compounds at the time of filing.

This case was filed before Applicants had a clear idea of the structures of their desired compounds, how to make their compounds, and use the compositions made from them. The specification provides broad areas of future research and speculation, inviting undue experimentation in learning how to use Applicants' invention. Applicants may well now be developing practical applications of their compounds, but the question here is what application they possessed at the time of filing. Anything is possible but as the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences wrote in *Bindra v. Kelly*, 206 USPQ 570 "*Probable* utility does not establish practical utility. Practical utility can, in our view, be established only by actual testing therefore, or by establishing such facts as would be convincing that such utility could be "foretold with certainty." *Blicke v. Treves*, supra, 112 USPQ at 475."

Applicants are reminded of what the U.S. Court of Appeals Federal Circuit wrote in *University of California v. Eli Lilly and Co.* 43 USPQ2d 1398, "In claims involving chemical materials, generic formulae usually indicate with specificity what the generic claims encompass. One skilled in the art can distinguish such a formula from others and can identify many of the species that the claims encompass. Accordingly, such a formula is normally an adequate description of the claimed genus." "A definition by function, as we have previously indicated, does not suffice to define the genus because it is only an indication of what the gene does, rather than what it is. See *Fiers*, 984 F.2d at 1169-71, 25 USPQ2d at 1605-06 (discussing Amgen). "It is only a definition of a useful result rather than a definition of what achieves that result." "The description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention. See *In re Wilder*, 736 F.2d 1516, 1521, 222 USPQ 369, 372-73 (Fed. Cir. 1984) (affirming rejection because the specification does "little more than outlin[e] goals appellants hope the claimed invention achieves and the problems the invention will hopefully ameliorate.")".

11. Claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 are newly rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making the compounds of dependant claims 4-6, 8, 10,

54, 55, and 57, does not reasonably provide enablement for making all compounds where M is defined in claim 1. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. "The factors to be considered [in making an enablement rejection] have been summarized as the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in that art, the predictability or unpredictability of the art and the breadth of the claims", *In re Rainer*, 146 USPQ 218 (1965); *In re Colianni*, 195 USPQ 150, *Ex parte Formal*, 230 USPQ 546. a) Preparing any particular compound would first require ascertaining the structure of the M radical, devising a synthesis of the substance, and performing the required synthesis in the laboratory. This is an open-ended and potentially inconclusive degree of experimentation. b) The direction concerning synthesis is found in the passage spanning line 6, page 89 to line 32, page 98. This passage describes general procedures to be used with M radicals possessing specific functional groups, not every potential M radical. c) There are twenty-one working examples of synthesis of a compound of formula (I). This is found in the passage spanning line 28, page 103 to line 22, page 107 as well as line 12, page

111 to line 11, page 114. d) The nature of the invention is chemical synthesis, which involves chemical reactions.

e) The state of the art is that instructions to a pharmacologist or physician to search for some particular drug hardly constitute directions to the average BS organic chemist of how to make these compounds attached to Applicants cyclic phosphonamide array. f) The artisan using Applicants invention to prepare the claimed compounds would be a process chemist or pilot plant operator with a BS degree in chemistry and several years of experience. g) Chemical reactions are well-known to be unpredictable, *In re Marzocchi*, 169 USPQ 367, *In re Fisher*, 166 USPQ 18. h) The breadth of the claims includes all of the unknown number compounds of formula I.

MPEP 2164.01(a) states, "A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. *In re Wright*, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)." That conclusion is clearly justified here. Thus, undue experimentation will be required to practice Applicants' invention.

The five arguments concerning the three rejections concerning the structure of M will be considered together. Applicants argue that the function of "biologically active agents" is understood, that the radical M is not an essential feature of the claimed molecules, that Applicants excluded the amine radicals discussed in point #11 out of caution concerning the prior art, rely upon the declaration discussed above to establish the required linkage between the structure and function of radical M, and rely upon the declaration to establish the routine nature of making the compounds of formula I, containing the elusive M radical..

This is not persuasive. Firstly, there is no confusion about the function of M. What Applicants fail to address is the question of the unknown chemical structure of M. Secondly, Applicants' compounds are to be used for therapy. The phosphorus containing ring of formula I is not the moiety responsible for the pharmacological activity. Applicants admit that the molecule M-H is the active core. It is not logical that M is not essential for the function of Applicants' compounds since the compounds are to be used for therapy.

Thirdly, Applicants agree that the radicals omitted by proviso are not biologically active. While one can only admire Applicants caution concerning prior art, why omit something that is not included with in the definition of M? Why cause the present indefiniteness, if Applicants are so certain they understand

the structures of all M-H compounds? Applicants would appear to be agreeing with the Examiner. The fourth point was discussed above. As to the fifth point, Applicants simply fail to address the central question, how can a B.S. process chemist make a compound whose structure he does not know.

12. Claims 1-18, 20-46, 48-57, 150-153, 155-157, 165, and 171-173 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 25, page 13, claim 1, Applicants claim "prodrug". The word "prodrug" is indefinite. The issue on second paragraph is whether the structures of the claimed compounds are clearly defined. Applicants' "prodrugs" are molecules whose structure lie outside the subject matter of formula I, but upon metabolism in the body are converted to active compounds falling within the structural scope of formula I. The claim describes the function intended but provides no specific structural guidance to what constitutes a "prodrug". The word also occurs in claims 150, 171, 172, and 173.

The Examiner suggests deleting the word prodrug.

13. Claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey

to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The word "prodrug" in line 25, page 13, claim 1, lacks written description. Applicants' claims are drawn to any derivative of the compounds of formula I with a specific biological property. What are the structures of these prodrugs? Structural formulas, names, or both can accurately describe organic compounds, which are the subject matter of claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173. The issue was discussed above in the paragraph concerning written description of radical "M".

14. Claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making the salts of the compounds of formula I, does not reasonably provide enablement for making prodrugs of those compounds. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Directions to a team of pharmacologist, medicinal chemists, and pharmacokinetics experts of how to search for Applicants prodrugs hardly constitute direction to the process chemist of how to make these claimed compounds.

15. The factors to be considered in making an enablement rejection have been summarized above. a) Finding a prodrug is an empirical exercise. Predicting if a certain ester of a claimed alcohol, for example, is in fact a prodrug, that produces the active compound metabolically, in man, at a therapeutic concentration and at a useful rate is filled with experimental uncertainty. Although attempts have been made to predict drug metabolism *de novo*, this is still an experimental science. For a compound to be a prodrug, it must meet three tests. It must itself be biologically inactive. It must be metabolized to a second substance in a human at a rate and to an extent to produce that second substance at a physiologically meaningful concentration. Thirdly, that second substance must be biologically active. Determining whether a particular compound meets these three criteria in a clinical trial setting requires a large degree of experimentation.

b) There is extensive discussion of the concept of prodrug and how to search for and prepare compounds of formula I that are themselves prodrugs. The direction concerning making the prodrugs, which liberate the compounds of formula, I is found in lines 13-16, page 30. This passage just states Applicants intent to do so. c) There is no working example of a prodrug which produces a compound of formula I. The biological data in the passage spanning line 10, page 115 to line 26, page 126 do not demonstrate that even any of the compounds of

formula I are themselves prodrugs. The only *in vivo* experiments, Examples O-S appear to be prophetic and not working examples. d) The nature of the invention is clinical use of compounds and the pharmacokinetic behavior of substances in the human body. e) The state of the prodrug art is summarized by Wolff (Medicinal Chemistry). The table on the left side of page 976 outlines the research program to be undertaken to find a prodrug. The second paragraph in section 10 and the paragraph spanning pages 976-977 indicate the low expectation of success. In that paragraph the difficulties of extrapolating between species are further developed. Since, the prodrug concept is a pharmacokinetic issue, the lack of any standard pharmacokinetic protocol discussed in the last sentence of this paragraph is particularly relevant. Banker (Modern Pharmaceutics) in the first sentence, third paragraph on page 596 states that "extensive development must be undertaken" to find a prodrug. f) Wolff (Medicinal Chemistry) in the last paragraph on page 975 describes the artisans making Applicants' prodrugs as a collaborative team of synthetic pharmaceutical chemists and metabolism experts. g) The lack of predictability in finding prodrugs was discussed above. h) The breadth of the claims includes all of the hundreds of thousands of compounds of formula of claim 136 as well as the presently unknown list potential prodrug derivatives embraced by claim 136.

Thus, undue experimentation will be required to determine if any particular derivative is, in fact, a prodrug.

The six arguments concerning the three rejections concerning prodrug will be considered together. Applicants argue that functional language is permitted in patent claims, assert that the skilled chemist "knows what a prodrug is", correctly assert that the word occurs in many issued patents, rely upon the declaration discussed above to establish written description, express uncertainly as to which one of the eight *Wands* factors the examiner is relying upon for the conclusion of undue experimentation, and argue that prodrugs are routine in medicinal chemistry. This is not persuasive. Firstly, while functional language can be used, prodrug lacks the critical attribute of possessing a clear, and well-understood connection between structure and function. That nexus must be present before a functional term can be used. Secondly, while the skilled chemist known what a prodrug is suppose to do, he most certainly does not know the structure of the derivate that conveys this property to any particular drug. He does not know what it "is", but rather what it does.

Thirdly, concerning the arguments about similar claims in issued US Patents, this is also not persuasive. The U.S. Court of Customs and Patent Appeals held, *In re WAITE AND ALLPORT* 77 USPQ 586, "[w]e apprehend that there is no

rule of patent law more firmly settled, nor any which has been more frequently stated, than the rule that this court will not allow rejected claims simply because similar claims may have been allowed by tribunals of the Patent Office in some other application, or even in the particular application under consideration. *In re Lee et al.*, 31 C.C.P.A. (Patents) 768, 139 F.2d 717, 60 USPQ 202, *In re Haller*, 34 C.C.P.A. (Patents) 1003, 161 F.2d 280, 73 USPQ 403."

Fourthly, the declaration was discussed above. Fifthly, all *Wands* eight factors were considered in reaching the conclusion of undo experimentation. As stated in MPEP §2164.01(a) " It is improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of nonenablement must be based on the evidence as a whole. 858 F.2d at 737, 740, 8 USPQ2d at 1404, 1407. A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). The determination that "undue experimentation" would have been needed to make and use the claimed

invention is not a single, simple factual determination. Rather, it is a conclusion reached by weighing all the above noted factual considerations. *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404."

Sixthly, concerning the alleged routine nature of prodrug synthesis and characterization, the references cited by the Examiner state the opposite. There is no magic derivative that converts a drug into a prodrug. A prodrug derivative that works with one drug usually fails with another. Only after the extensive experimentation can any derivative drug be shown to be a prodrug.

16. Claims 1-3, 7, 9-18, 20-46, 48-53, 150-153, 155-157, 165, 166, and 171-173 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase in lines 21-22, page 13 "M is not -NH(lower alkyl), -N(lower alkyl)$_2$" is indefinite. M-PO_3^{-2} etc must be biologically active. Are $^{-2}O_3P$-NH(lower alkyl) or $^{-2}O_3P$-N(lower alkyl)$_2$ biologically active? If not, the proviso excluded something that is not present.

Applicants state that they excluded the amine radicals out of caution concerning the prior art. While one can only admire Applicants caution concerning prior art, why omit something that is not included with in the definition of M? Why cause the present indefiniteness, if Applicants are so certain they

understand the structures of all M-H compounds? Applicants would appear to be agreeing with the Examiner. Removing the proviso can easily solve this issue.

17. Claim 150 remains rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 150 provides for transforming "a compound drug having a $-PO_3^{2-}$ ...", but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. All the word "transforming" does is delineate which molecules are staring materials and which are products. No reactions are named. No reagents are named. No conditions essential for any successful chemical reaction are specified. What chemical reactions are being claimed?

The Examiner suggests adding the reagents and condition they intend to use to the claims.

Claim 150 remains rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153

USPQ 678 (Bd. App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Applicants argue that the claim is to be read in light of the specification and the skilled process chemist would understand how to effect the claimed process. This is not persuasive. Applicants point to a Mitsunobu reaction on page 94 and Examples 1 and 4 as defining their synthetic process. They argue that these reagents and conditions are the steps required to perform. If this is all that is intended, then why not place these reaction conditions into the claims. The claims measure the invention. The U.S. Court of Customs and Patent Appeals wrote *In re Priest*, 199 USPQ 11 "We have consistently held that no applicant should have limitations of the specification read into a claim where no express statement of the limitation is included in the claim." *In re Prater*, 56 CCPA 1381, 1396, 415 F.2d 1393, 1405, 162 USPQ 541, 551 (1969)." The steps of a chemical process are the reagents and reactions required to affect the claim transformation. All Applicants have done is label what is the starting material and what is the product. No chemical steps are to be found in the claim.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date

of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Information regarding the status of an application should be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). Please direct general inquiries to the receptionist whose telephone number is (703) 308-1235.

20. Please direct any inquiry concerning this communication or earlier communications from the Examiner to Thomas C McKenzie, Ph. D. whose telephone number is (571) 272-0670. The FAX number for amendments is (703)

872-9306. The PTO presently encourages all applicants to communicate by FAX. The Examiner is available from 8:30 to 5:30, Monday through Friday. If attempts to reach the Examiner by telephone are unsuccessful, please contact Mukund Shah SPE of 1624 at (571)-272-0674.

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